

## **CRAIG A. BUSACK**

Conservation Biology Unit  
Science Division  
Fish Management Program  
Washington Department of Fish and Wildlife  
600 Capitol Way North  
Olympia, Washington 98501-1091  
(360) 902-2765 busaccsb@dfw.wa.gov

### **BACKGROUND**

1999-present	Program manager, Conservation Biology Unit, Washington Department of Fish and Wildlife
1991-1999	Research Scientist I, Washington Department of Fish and Wildlife (until 1994 Washington Department of Fisheries)
1988-1991:	Fish Biologist 3, Washington Department of Fisheries
1983-1988:	Assistant Professor of Biology, University of Mississippi.
1981-1983:	NSERC Visiting Postdoctoral Fellowship, Pacific Biological Station, Nanaimo, British Columbia.
1977-1981:	Ph.D. Genetics, University of California, Davis. Dissertation: Growth and reproduction of the mosquitofish: A phenotypic and genetic analysis
1975-1977:	M.S. Genetics, University of California, Davis. Thesis: Genetic variation among populations of Paiute trout ( <i>Salmo clarki seleniris</i> )
1973-1975:	B.S. Genetics, University of California, Davis.

### **SELECTED PUBLICATIONS**

Gall, G.A.E., C.A. Busack, R.C. Smith, J.R. Gold and B.J. Kornblatt. 1976. Biochemical genetic variation in populations of golden trout, *Salmo aquabonita*. Evidence of the Little Kern golden trout, *S. a. whitei*. J. Heredity 67: 330-335.

Busack, C.A., R. Halliburton and G.A.E. Gall. 1979. Electrophoretic variation and differentiation in four strains of domesticated rainbow trout (*Salmo gairdneri*). Can. J. Genet. Cytol. 21: 81-94.

Busack, C.A., and G.A.E. Gall. 1980. Ancestry of artificially propagated California rainbow trout strains. Calif. Fish Game 66: 17-24.

Busack, C.A., and G.H. Thorgaard. 1980. Karyotype of the Sacramento perch, *Archoplites interruptus*. Calif. Fish Game 66: 189-191.

Busack, C.A., G.H. Thorgaard, M.P. Bannon and G.A.E. Gall. 1980. An electrophoretic, karyotypic, and meristic characterization of the Eagle Lake trout, *Salmo gairdneri aquilarum*. Copeia 1980: 418-422.

Busack, C.A., and G.A.E. Gall. 1981. Introgressive hybridization in populations of Paiute cutthroat trout, *Salmo clarki seleniris*. Can. J. Fish. Aquat. Sci. 38: 939-951.

Busack, C.A., and G.A.E. Gall. 1983. An initial description of the quantitative genetics of growth and reproduction in the mosquitofish, *Gambusia affinis*. Aquaculture 32: 123-140.

Busack, C.A. 1983. Four generations of selection for high 56-day weight in the mosquitofish (*Gambusia affinis*). Aquaculture 33: 83-87.

Quinn, T.P., and C.A. Busack. 1985. Chemosensory recognition of siblings in juvenile coho salmon (*Oncorhynchus kisutch*). Animal Behavior 33: 51-56.

Gall, G.A.E., and C.A. Busack (Editors). 1986. Genetics in Aquaculture II. Elsevier Science Publishers, Amsterdam. 386 pp.

Busack, C.A., K.W. Thompson and R.G. Garavelli. 1987. Florida bass alleles in Mississippi largemouth bass populations: a preliminary report. J. Miss. Acad. Sci. 32: 61-69.

Busack, C.A. 1988. Electrophoretic variation in the red swamp (*Procambarus clarkii*) and the white river crayfish (*P. acutus*)(Decapoda: Cambaridae). Aquaculture 69: 211-226.

Busack, C.A. 1989. Biochemical systematics of the crayfish genus *Procambarus*, subgenus *Scapulicambarus* (Decapoda: Cambaridae). J. N. Amer. Benthol. Soc. 8: 180-186.

Shaklee, J.B., C. Busack, A. Marshall, M. Miller, and S.R. Phelps. 1990. The electrophoretic analysis of mixed-stock fisheries of Pacific salmon. In: Z-I. Ogita and C.L. Markert, eds. Proceedings of the Sixth International Congress on Isozymes. Progress in Clinical and Biological Research. Wiley-Liss, Inc., New York.

Busack, C. 1990. Yakima/Klickitat Production Project genetic risk assessment. In Yakima/Klickitat Production Project Preliminary Design Report, Appendix A. Bonneville

Power Administration, DOE/BP-00245-2.

Shaklee, J.B., C.A. Busack, and C.W. Hopley. 1993. Conservation genetics programs for Pacific salmon at the Washington Department of Fisheries: Living with and learning from the past, looking to the future. Pages 110-141 in K.L. Main and B. Reynolds, eds., *Selective Breeding of Fishes in Asia and the United States*. The Oceanic Institute, Honolulu, HI.

Busack, C., and K.P. Currens. 1995. Genetic risks and hazards in hatchery operations: Fundamental concepts and issues. *AFS Symposium* 15: 71-80.

Currens, K.P., and C. Busack. 1995. A framework for assessing genetic vulnerability. *Fisheries* 20: 24-31.

Busack, C., and J.B. Shaklee, eds. 1995. Genetic diversity units and major ancestral lineages of salmonid fishes in Washington. Washington Department of Fish and Wildlife, Olympia.

Busack, C., B. Watson, T. Pearsons, C. Knudsen, S. Phelps, and M. Johnston. 1997. Yakima Fisheries Project spring chinook supplementation monitoring plan. Project 95-065, DOE/BP-64878-1, Bonneville Power Administration, Portland, OR.

Busack, C., and C. Knudsen. A production-function based model of supplementation dynamics. *Transactions of the American Fisheries Society*. Submitted, in revision.

Olsen, J. B., C. Busack, J. Britt, and P. Bentzen. 2001. The aunt and uncle effect: an empirical evaluation of the confounding influence of full sibs of parents on pedigree reconstruction. *Journal of Heredity* 92(3) (In Press).

Busack, C., and C. Knudsen, and S. Phelps. The effective size advantage of factorial mating in fish hatcheries. In preparation.

Knudsen, C., S. Phelps, C. Busack, and D. Seiler. Effects of Size Selective Gillnet Fisheries on Coho Salmon (*Oncorhynchus kisutch*): Temporal Trends in Size-at-maturity and Fecundity. (In preparation)